3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS

B. Emergency Core Cooling Subsystems Actuation

When irradiated fuel is in the reactor vessel and the reactor water temperature is above 212°F, the limiting conditions for operation for the instrumentation which initiates the emergency core cooling sybsystems are given in Table 3.2.2.

C. Control Rod Block Actuation

The limiting conditions of operation for the instrumentation that initiates control rod block are given in Table 3.2.3.

D. Air Ejector Off-Gas System

1. Except as specified in 3.2.D.2 and 3.2.D.3, both steam jet air ejector off-gas radiation monitors shall be operable during reactor power operation. The trip settings for the air ejector monitors, except as specified in 3.2.D.4, shall be set to close within 30 minutes the recombiner train inlet valve(s) at a level not to exceed the equivalent of 270,000 microcuries per second after a decay time of 30 minutes.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
2. From and after the date that one of the two steam jet air ejector off-gas radiation monitors is made or found to be inoperable, continued reactor power operation is permissible provided the inoperable radiation monitor instrument channel is tripped. 3. Upon loss of both steam jet air ejector off-gas radiation monitors, an orderly shutdown shall be initiated and the reactor shall be in cold shutdown within 24 hours. 4. If operation is necessary with the Off-Gas Holdup System recombiners bypassed, the steam jet air ejector radiation monitors shall be set to close the off-gas isolation valve instead of the recombiner inlet valves with a delay time not to exceed 15 minutes.	

E. Reactor Building Ventilation Isolation and Standby Gas Treatment System Initiation

1. a. Except as specified in 3.2.E.1.b below, four radiation monitors shall be operable at all times.

   b. One of the two monitors in the ventilation plenum and one of the two radiation monitors on the refueling floor may be inoperable for 24 hours. If the inoperable monitors are not restored to service in this time, the reactor building ventilation system shall be isolated and the standby gas treatment system operated until repars are complete.

2. The radiation monitors shall be set to trip as follows:

   (a) ventilation plenum $\leq$ 3 mr/hr
   (b) refueling floor $\leq$100 mr/hr

3. When irradiated fuel is in the reactor vessel and the reactor water temperature is above 212°F, the limiting conditions for operation for the instrumentation listed in Table 3.2.4 shall be met.

Table 4.2.1 - Continued

Minimum Test and Calibration Frequency For Core Cooling, Rod Block and Isolation Instrumentation

Instrument Channel	Test (3)	Calibration (3)	Sensor Check (3)
3. Steam Line Low Pressure	Note 1	Once/3 months	None
4. Steam Line High Radiation	Once/week (5)	Note 6	Once/shift
HPCI ISOLATION			
1. Steam Line High Flow	Note 1	Once/3 months	None
2. Steam Line High Temperature	Note 1	Once/3 months	None
RCIC ISOLATION			
1. Steam Line High Flow	Note 1	Once/3 months	None
2. Steam Line High Temperature	Note 1	Once 3/months	None
REACTOR BUILDING VENTILATION			
1. Radiation Monitors (Plenum)	Note 1	Once/3 months	Once/shift
2. Radiation Monitors (Refueling Floor)	Note 1	Once/3 months	(4)
OFF-GAS ISOLATION			
1. Radiation Monitors (Air Ejectors)	Notes (1,5)	Note 6	Once/shift

NOTES:

(1) Initially once per month until exposure hours (M as defined on Figures 4.1.1) is 2.0×10^5, thereafter according to Figure 4.1.1, with an interval not greater than three months.

3.2 For effective emergency core cooling for the small pipe break the HPCI or Automatic Pressure Relief system must function since for these breaks, reactor pressure does not decrease rapidly enough to allow either core spray or LPCI to operate in time. The arrangement of the tripping contacts is such as to provide this function when necessary and minimize spurious operation. The trip settings given in the specification are adequate to assure the above criteria is met. Reference Section 6.2.4 and 6.2.6 FSAR. The specification preserves the effectiveness of the system during periods of maintenance, testing, or calibration, and also minimizes the risk of inadvertent operation; i.e., only one instrument channel out of service.

Two air ejector off-gas monitors are provided and when their trip point is reached, cause an isolation of the air ejector off-gas line. Isolation is initiated when both instruments reach their high trip point or one has an upscale trip and the other a downscale trip or two downscale. There is a 30-minute delay before recombiner train inlet valve closure when the recombiners are in use and a 15-minute delay before off-gas isolation valve closure when the recombiners are bypassed in which the reactor operator may take corrective action. Both instruments are required for trip. The trip settings of the instruments are set so that the maximum stack release rate limit allowed by Specification 3.8.A.1 is not exceeded.

Four radiation monitors are provided which initiate isolation of the reactor building and operation of the standby gas treatment system. The monitors are located in the reactor building ventilation plenum and on the refueling floor. Any one upscale trip will cause the desired action. Trip settings of 3 mr/hr for the monitors in the ventilation duct are based upon initiating normal ventilation isolation and Standby Gas Treatment System operation so as not to exceed the maximum release rate limit allowed by Specification 3.8.A.1 for the reactor building vent of 21,000 microcuries per second of gross radioactivity. Trip settings of 100 mR/hr for the monitors on the refueling floor are based upon initiating normal ventilation isolation and standby gas treatment system operation so that none of the activity released during the refueling accident leaves the reactor building via the normal ventilation stack but that all the activity is processed by the standby gas treatment system.

Although the operator will set the set points within the trip settings specified in Tables 3.2.1, 3.2.2, 3.2.3 and 3.2.4, the actual values of the various set points can differ appreciably from the value the operator is attempting to set. The deviations could be caused by inherent instrument error, operator setting error, drift of the set point, etc. Therefore, these deviations have been accounted for in the various transient analyses and the actual trip settings may vary by the following amounts.

3.0 LIMITING CONDITIONS FOR OPERATION

3.8 RADIOACTIVE EFFLUENTS

Applicability:

Applies to the gaseous and liquid radioactive effluents from the plant.

Objective:

To assure that radioactive material is not released to the environment in an uncontrolled manner and to assure that any material released is kept as low as practicable and, in any event, is within the limits of 10CFR Part 20.

Specification:

A. Airborne Effluents

A set of equations are given to express the airborne effluent limits. The symbols stand for the following:

Q1 = release rate from the off-gas stack

QRS = release rate from the reactor building vent

4.0 SURVEILLANCE REQUIREMENTS

4.8 RADIOACTIVE EFFLUENTS

Applicability:

Applies to the periodic monitoring and recording of radioactive effluents.

Objective:

To ascertain that radioactive releases are being kept as low as practicable and within allowable values.

Specification:

A. Airborne Effluents

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS

1. The maximum release rates of gross radioactivity computed on a 15-minute average basis shall not exceed a rate Q, in curies/sec:

$$\frac{Q1}{0.27} + \frac{QRS}{0.021} \leq 1$$

2. The release rates of gross radioactivity shall not exceed 16 percent of the limit in Specification 3.8.A.1 averaged over any calendar quarter.

3. The maximum release rate of radioiodine-131 (I-131) shall not exceed a rate Q, in microcuries/sec:

$$\frac{Q1}{25} + \frac{QRS}{1.2} \leq 1$$

4. The release rate of I-131 shall not exceed 4 percent of the limit in Specification 3.8.A.3 averaged over any calender quarter.

5. The maximum release rates of radioactive particulates with half-lives greater than 8 days shall not exceed a rate Q, in microcuries/sec:

$$\frac{Q1}{9.5X10^{?}\ \overline{MPCa}} + \frac{QRS}{1.1X10^{8}\ \overline{MPCa}} \leq 1$$

where $\overline{MPCa}$ is the composite maximum permissible concentration in air in uCi/ml determined using Appendix B, Table II, Column 1 and Notes of 10 CFR 20.

1. Station records of gross stack release rate of gaseous activity shall be maintained on an hourly basis to assure that the specified rates are not being exceeded, and to yield information concerning general integrity of the fuel cladding. Records of isotopic analysis shall be maintained. The off-gas stack and reactor building vent monitoring system shall be functionally tested monthly and calibrated quarterly with an appropriate standard radiation source. Each monitor, as described, shall have a sensor check at least daily.

2. An air ejector off-gas sample isotopic analysis for at least six fission product gases; Xe-138, Se-135, Se-133, Kr-88, Kr-85m, Kr-87 shall be made at least weekly and following each refueling or other occurrence which could alter significantly the mixture of radionuclides.

6. The release rates of radioactive particulates with half-lives greater than 8 days shall not exceed 8 percent of the limit in Specification 3.8.A.5 averaged over any calendar quarter.

7. If the maximum release rate limits of Specifications 3.8.A.1, 3.8.A.3, or 3.8.A.5 are not met following a routine surveillance check, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.

8. If the limits of Specifications 3.8.A.2, 3.8.A.4 or 3.8.A.6 are exceeded, appropriate corrective action such as an orderly reduction of power shall be initiated to bring the releases within these limits.

9. If the release rates exceeds four percent of the limits in Specification 3.8.A.1 averaged over any calendar quarter or two percent of the limits in Specifications 3.8.A.3 or 3.8.A.5 averaged over any calendar quarter, the following actions shall be taken:

3. Gaseous release of tritium shall be calculated on a quarterly basis from tritium concentration of the condensate. Vaporous tritium shall be calculated from a representative sample. The sum of these two values shall be reported as the total tritium release.

4. Station records of release of radioiodines and particulates with half-lives greater than 8 days shall be maintained on the basis of all stack and vent cartridges counted. The charcoal cartridges shall be counted weekly when the measured release rate of radioiodine-131 activity is less than the rate of Specification 3.8.A.4; otherwise the cartridges shall be counted daily. The particulate filters shall be counted weekly when the measured release rate of particulate radioactivity with half-lives greater than 8 days is less than the rate of Specification 3.8.A.6; otherwise the activity shall be counted daily. Monthly the principal particulate gamma radionuclides shall be determined.

6. The release rates of radioactive particulates with half-lives greater than 8 days shall not exceed 8 percent of the limit in Specification 3.8.A.5 averaged over any calendar quarter.

7. If the maximum release rate limits of Specifications 3.8.A.1, 3.8.A.3, or 3.8.A.5 are not met following a routine surveillance check, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.

8. If the limits of Specifications 3.8.A.2, 3.8.A.4 or 3.8.A.6 are exceeded, appropriate corrective action such as an orderly reduction of power shall be initiated to bring the releases within these limits.

9. If the release rates exceeds four percent of the limits in Specification 3.8.A.1 averaged over any calendar quarter or two percent of the limits in Specifications 3.8.A.3 or 3.8.A.5 averaged over any calendar quarter, the following actions shall be taken:

3. Gaseous release of tritium shall be calculated on a quarterly basis from tritium concentration of the condensate. Vaporous tritium shall be calculated from a representative sample. The sum of these two values shall be reported as the total tritium release.

4. Station records of release of radioiodines and particulates with half-lives greater than 8 days shall be maintained on the basis of all stack and vent cartridges counted. The charcoal cartridges shall be counted weekly when the measured release rate of radioiodine-131 activity is less than the rate of Specification 3.8.A.4; otherwise the cartridges shall be counted daily. The particulate filters shall be counted weekly when the measured release rate of particulate radioactivity with half-lives greater than 8 days is less than the rate of Specification 3.8.A.6; otherwise the activity shall be counted daily. Monthly the principal particulate gamma radionuclides shall be determined.

a. Investigate to identify the causes for such release rates.

b. Define and initiate a program to reduce such release rates to the design level

c. Provide a report describing these actions within 30 days as an unusual event (See Specification 6.7.B.2).

10. At least one of the two stack monitors, including the charcoal cartridge and particulate filter, shall be operable at all times that the stack is releasing effluents to the environs.

11. If both stack monitors are made or found inoperable, the reactor shall be placed in the hot standby condition within 24 hours.

12. Except as specified in 3.8.A.13, the off-gas stack and reactor building vent monitors shall have automatic isolation setpoints consistent with Specification 3.8.A.1 and alarm setpoints consistent with Specification 3.8.A.2.

13. If operation is necessary with the Off-gas Holdup System recombiners bypassed, the off-gas stack monitors shall serve only an alarm function.

3.0 LIMITING CONDITIONS FOR OPERATION	4.0 SURVEILLANCE REQUIREMENTS
B. Mechanical Condenser Vacuum Pump 1. The mechanical condenser vacuum pump shall be capable of being isolated and secured on a signal of high radioactivity whenever the main steam line isolation valves are open. 2. If the limits of 3.8.B.1 are not met following a routine surveillance check, the mechanical condenser vacuum pump shall be kept in an isolated condition until repairs are made.	B. Mechanical Condenser Vacuum Pump 1. At least once during each operating cycle, verify automatic isolation of the mechanical condenser vacuum pump.

3.0 LIMITING CONDITIONS FOR OPERATION

3. Two independent samples of each tank shall be taken and analyzed for gross beta-gamma activity and the valve line-up checked prior to discharge of liquid effluents.

4. If the limits of 3.8.C cannot be met, radioactive liquid effluents shall not be released.

D. Radioactive Waste Storage

The maximum amount of radioactivity in liquid storage in the Waste Sample Tanks, Floor Drain Sample Tanks, Waste Surge Tanks and the Condensate storage tanks shall not exceed 2 curies. If this condition cannot be met, the liquids in these tanks shall be recycled to tanks within the radwaste facility until the specification is met.

E. Augmented Off-Gas System

1. If the hydrogen concentration in the off-gas downstream of the recombiners reaches four percent, the recombiner off-gas flow shall be stopped automatically by closing the valves upstream of the recombiners.

2. Except as specified in Specification 3.8.E.3 below, at least one hydrogen monitor upstream and one hydrogen monitor downstream of each operating recombiner shall be operable during power operation.

4.0 SURVEILLANCE REQUIREMENTS

3. The performance and results of independent samples and valve checks shall be logged.

D. Radioactive Waste Storage

A sample from each of the Waste Sample, Floor Drain, Condensate Storage and Waste Surge Tanks shall be taken, analyzed and recorded every 72 hours. If no additions to one of the above tanks has occurred since the last sample, that tank need not be sampled until the next addition.

E. Augmented Off-Gas System

1. The hydrogen monitors shall be functionally tested monthly and calibrated quarterly with an appropriate gas mixture source. Each monitor shall have a sensor check at least daily.

2. Tank radiation monitors shall be calibrated quarterly by correlation with tank sample analyses. Monitor readings shall be recorded every eight hours to determine that the limit of Specification 3.8.E.4 is not exceeded.

3. If the above specified upstream hydrogen monitors are not operable, continued operation of a recombiner is permissible if the Hydrogen Inventory Processor is set to provide a constant signal representative of the worse case hydrogen concentration. If the above specified downstream hydrogen monitors are not operable, an orderly reactor shutdown shall be initiated to transfer the Off-gas System to the recombiner bypass mode.

4. The maximum gross radioactivity contained in one gas decay tank after 12 hours hold-up that can be discharged directly to the environs shall be less than 22,000 curies of Xe-133 dose equivalent. If these conditions cannot be met, the stored radioactive gas shall be recycled within 24 hours to other gas decay tanks until the condition is met.

3. If a tank radiation monitor is inoperable, a sample from the gas decay tank shall be taken, analyzed, and recorded every 24 hours. If no additions to a tank have occurred since the last sample, the tank need not be sampled until the next addition.

F. Environmental Monitoring Program

The environmental monitoring program given in Table 4.8.1 shall be conducted.

Bases:

A. Airborne Effluents

Detailed dose calculations for several locations off-site have been made and are described in Appendix B of the FSAR.* These calculations consider site meteorology, buoyancy characteristics, and isotopic content of the effluent. Based on these calculations, an annual average release rate of gross beta-gamma activity, except halogens and particulates with half lifes longer than 8 days, in the amount of 0.27 curies/second from Unit 1 stack or 0.021 curies/second from the reactor building vent will not result in off-site annual doses in excess of the limit specified in 10CFR20. These limits are based on a noble gas mixture whose MPC is $3x10^{-8}$ µCi/cc.

In order to limit gross radioactivity releases in gaseous effluents to as low as practicable, quarterly average release rates have been established which would require investigative actions at 4 percent of the maximum release rate and restricted operation action at 16 percent of the maximum release rate. These release rates are significantly below 10CFR20 limits and are factors of 2 and 8, respectively, above the design objectives.

Detailed thyroid dose calculations have been made by the AEC staff. The method is based on a 1500 mRem dose to a child that drank the milk from an existing milk cow continuously consuming the grass from the critical sector (northwest sector at 1.5 miles). The maximum annual diffusion parameter (X/Q) from the licensee's meteorological data for the stack release is $1.7x10^{-8}$ sec/m^3. Based on these calculations, a continuous release rate of I-131 in the amount of 25 µCi/sec from the off-gas stack would not result in off-site annual thyroid doses in excess of the limits specified in 10CFR20 of 1500 mRem.

* The bases for the reactor building vent release rate (QRS) are not covered in Appendix B. The same methods described in Appendix B were used to analyze the reactor building vent except that a ground level release was assumed. The calculations show that 0.021 Curie/second of gaseous and airborne particulate wastes can be released from the reactor building vent and not exceed the limits of 10CFR20.

Bases Continued:

The AEC staff performed an analysis similar to that used to determine the maximum release rate for I-131 for radioactive particulates. A reduction factor of 700 on the $\overline{MPCa}$ to allow for possible ecological chain effects similar to those associated with radioiodine was used. The annual average diffusion parameter value of 1.5×10^{-7} sec/m^3 was used as determined for the most critical sector for an elevated release at 600 m in the SSE sector. Based on these calculations, a continuous release rate of radioactive particulates with half-lives greater than 8 days in the amount of 9.5×10^{9} $\overline{MPCa}$ μCi/sec from the off-gas stack would not result in offsite annual organ doses in excess of the limits specified in 10 CFR 20. The resultant organ doses are not additive to those caused by the radioiodine or gross radioactivity releases.

The staff performed similar analysis for the reactor building vent release as for the off-gas stack releases except the releases were considered to be at or near ground level. The maximum annual average diffusion parameter (X/Q) from the licensee's meteorological data for the ground level release as used for radioactive particulates is 1.3×10^{-5} sec/m^3. The annual average diffusion parameter at the nearest existing milk cow as used for radioiodine is 3.5×10^{-7} sec/m^3. Based on these calculations, a continuous ground level release rate of I-131 in the amount of 1.2 uCi/sec would not result in offsite annual thyroid doses in excess of the limits specified in 10 CFR 20 of 1500 mRem. A continuous ground level release rate of radioactive particulates with half lives greater than 8 days in the amount of 1.1×10^{8} $\overline{MPCa}$ μCi/sec would not result in offsite annual organ doses in excess of the limits specified in 10 CFR 20.

In order to limit radioiodine releases in gaseous releases to as low as practicable, quarterly average release rates have been established which would require investigative actions at 2 percent of the maximum release rate and restricted operation action at 4 percent of the maximum release rate. These release rates are significantly below 10 CFR 20 limits and are factors of 2 and 4, respectively, above the design objectives as defined in Regulatory Guide 1.42.

In order to limit radioactive particulate releases in gaseous effluents to as low as practicable, quarterly average release rates have been established which would require investigative actions at 2 percent of the maximum release rate and restricted operation action at 8 percent of the maximum release rate. These release rates are significantly below 10 CFR 20 limits and are factors of 2 and 8, respectively, above the design objectives.

Bases Continued:

Measurements of the gross radioactivity from the off-gas stack must be continuously monitored for possible changes in the release rates from the augmented off-gas system. Additional measurements are made continuously at the steam jet air ejector to evaluate the core condition and the quantity of radioactivity being added to the augmented off-gas system. The measurements obtained by sampling and isotopic analysis define the releases to the environs. Quarterly analysis for tritium is adequate to define such releases to the environs.

Isotopic analysis will be performed on samples taken from the steam jet air ejector. These samples will be used in an isotopic analysis for Xe-138, Xe-135, Xe-133, Kr-88, Kr-87, and Kr-85m, which is calculated to be approximately 90 percent of the noble gas emission. The remaining noble gases will be calculated from empirical ratios with the measured gases. Such calculations will be made for the various gases down to a release rate of 100 uCi/sec. Argon 41 will not be measured routinely since it cannot be measured in the presence of the other noble gases.

The measurements and methods used for releases from the reactor building vent are similar to those described for releases from the off-gas stack. It may be necessary to use off-gas stack data to evaluate the predicted low levels of release from the reactor building vent. Batch releases may be made during drywell purging or other special conditions when continuous monitoring is not avialable. For such conditions, sampling and analysis are required before releases are made and meterological conditions may be used, if practical, to reduce possible environmental impact for such releases. If the samples indicate high concentrations of either radioiodines and/or radioactive particulates, the releases shall be filtered by the Standby Gas Treatment System.

Concentrations of gross radioactivity in the reactor building vent are expected to be below the minimum detectable levels with the existing analytical equipment. Therefore, isotopic analyses of samples from the vent will not normally be performed.

Measurement of the gross radioactivity from the duct to the vent is based upon an equivalent dose rate for the release rate in curies per second, i.e., analysis of a typical vent gas release resulted in a gamma dose rate of 3 mr/hr being equivalent to 21,000 microcuries/second release rate. Since an isotopic analysis cannot be made routinely of the vent effluent, the assumption is made that the isotopic composition in the vent will be the same as determined in the off-gas stack.

Bases Continued:

The release of radioiodine from the reactor is monitored by the use of charcoal cartridges which integrate the releases over the sampling period of one to seven days. Frequency of removal is dependent upon the release level measured on the previously removed charcoal cartridge. The relationship between coolant activity levels for radioiodine and effluent releases during possible iodine spiking conditions has not been determined. Measurements required for such possible operating conditions that may result in iodine spiking should provide necessary effluent data to the operator to evaluate plant conditions during such periods. The analysis performed for I-133 and I-135 indicates the contribution of these radioiodines to the possible inhalation doses.

The release of radioactive particulates with half lives greater than 8 days from the off-gas stack is monitored by the use of particulate filters which integrate the releases over the sampling period of one to seven days. All other aspects of particulate release measurements are similar to those discussed for radioiodine release measurements except for the relationship of iodine spiking to reactor operating conditions.

B. Mechanical Vacuum Pump

The purpose of isolating the mechanical vacuum pump line is to limit release of activity from the main condenser during a control rod drop accident. During the accident, fission products would be transported from the reactor through the main steamlines to the main condenser. The fission product radioactivity would be sensed by the main steamline radioactivity monitors and initiate isolation.

C. Liquid Effluents

The radioactive liquid effluents from the Monticello plant will be controlled on a batch basis with each batch being processed by such method or methods appropriate for the quality of materials determined to be present. Those batches in which the radioactivity concentrations are sufficently low to allow release to the discharge canal are diluted with condenser circulating water in order to achieve the allowable concentrations set forth in 10 CFR 20. The radioactive liquid will be sampled and analyzed for gross radioactivity prior to release to the discharge canal, thus providing a means of obtaining information on effluents to be released so that appropriate release rates will be established.

Bases Continued:

Liquid effluent release will be controlled in terms of the concentrations in the discharge canal. In the case of unidentified mixtures, such concentration limits is based on the assumption that the entire content is made up of the most restrictive isotope in accordance with 10 CFR 20. Such a limit assures that even if a person obtained all of his daily water intake from such a source, the resultant dose would not exceed that specified in 10 CFR 20. Since no such use of the discharge canal is made and considerable natural dilution occurs prior to any locations where such usage could occur, this assures that off-site doses from this source will be far less than the limits specified in 10 CFR 20.

If radioactive effluents are released to unrestricted areas on a radionuclide basis, the MPC shall be determined and controlled in the cooling water discharge canal in accordance with Appendix B Table II Column 2 of 10 CFR 20 and Note 1 thereto.
Each batch to be released will conform to 10CFR20 release limits on an instantantous basis, i.e., annual averaging will not be used as permitted by 10CFR20. See Section 9.2.3 of the FSAR. The radioactivity level in the discharge canal for a given release of waste will be the highest when the discharge canal flow is lowest. This occurs during "closed cycle" cooling tower operation at which time the cooling tower blowdown of approximately 36 cubic feet per second is the major flow in the discharge canal. The rate of pumping the radwaste effluent into the discharge canal is variable and can, therefore, be controlled to maintain the concentration within the specified limit. This type of operation will be employed only when the river flow is very low and will result in further dilution between discharge canal effluent and the river.

D. Radioactive Waste Storage

The waste sample, floor drain, waste surge and condensate storage tanks are not contained in a Class I structure. A postulated catastrophic failure of these tanks could cause release of the contained radioactive liquids to the river. To assure that such a postulated release from all the tanks would not raise radioactivity levels in the river at the public water intakes to values greater than 10 CFR 20 limits, the maximum amount of radioactivity that can be contained in these tanks is established.

Bases Continued:

E. Augmented Off-Gas System

The hydrogen monitors are used to detect possible hydrogen buildups which could result in a possible hydrogen explosion. Isolation of the off-gas flow would prevent the hydrogen explosion and possible damage to the augmented off-gas system.

Experience has shown that a daily check with monthly testing and quarterly calibration assures proper operation of the hydrogen monitors and quarterly calibration assures proper operation of the radiation monitors.

The maximum gross radioactivity in one gas decay tank has been limited on the basis that accidental release of its contents to the environs by operator error after 12 hours decay should not result in exceeding the dose equivalent to the maximum quarterly release rate specified in Specification 3.8.A.2. Staff analysis of an elevated release under accident meteorology for a minimum release period of 8 hours indicated a release of 22,000 curies of Xe-133 or the dose equivalent would result in a whole body dose of 20 mRem at the nearest site boundary.

The frequency for monitoring or sampling has been established so that if the maximum amount of gross radioactivity is exceeded, action can be taken to reduce the radioactivity to a level below the specified limit.

F. Environmental Monitoring Program

It is recognized that a precise determination of environmental dose from a certain emission from the stack is only possible by direct measurement. Such information will be provided by the environmental monitoring program conducted at and around the site. If the stack emission ever reaches a level such that it is measureable in the environment, such measurements will provide a basis for adjusting the proposed stack limit long before the effect in the environment is of any concern for permissible dose. In this regard, it is important to realize that averaging emission rate over a period of one calendar year as permitted by 10 CFR 20 represents a very large safety margin between conditions at any one instant (any minute, hour or day) and the long-term dose of interest.

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DESCRIPTION:
Ltr requesting a change in tech specs....trans the following........

PLANT NAME: Monticello

ENCLOSURES:
Request for change in tech specs., notarize 10-31-73, consist of revision to replace change #2 in its entirety.

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✓16 - CYS ACRS ~~HOLDING~~ Sent to Diggs 11-2-73

(1)(2)(10)-NATIONAL LAB'S ______
1-ASLBP(E/W Bldg,Rm 529)
1-W. PENNINGTON, Rm E-201 GT
1-CONSULTANT'S NEWMARK/BLUME/AGBABIAN
1-GERALD ULRIKSON...ORNL

1-PDR-SAN/LA/NY
1-GERALD LELLOUCHE BROOKHAVEN NAT. LAB
1-AGMED(Ruth Gussman) RM-B-127, GT.
1-RD..MULLER..F-309 G